Spoken comments

Before (1) mathematics is replete with what Dummett calls indefinitely extensible concepts, notions of the infinite, the transfinite and so on. Is any of this really meaningful?

After (3) I want to look at this argument and see exactly what the claim amounts to using much simpler examples than those employed by Lucas & Penrose.

I am asking the following question: what sort of truths in arithmetic sustain the Lucas–Penrose argument and how do we know them to be true, if we can't prove them?!

(Let's now look at the argument that G is true – show A_1, A_2 —)

Final Comment

So the Lucas–Penrose argument is contentious.

In this short paper I hope to have pointed to the key issues in terms of which the argument should be assessed.

To return to our starting point: we argued that truth is valuable but even in mathematics the question of what we really know the truth of influences like CH is deeply problematic for the reasons we have indicated. Perhaps that is why we are all unreconstructed Platonists in the philosophy of mathematics.

Mathematics & the Mind

Transparencies

0. Minds, Machines & All That.
1. Truth and Value
2. The case of Mathematics
3. The Lucas-Penrose argument
4a How do we know that G is true? 3b#2 – contd.
4 Sorites arithmetic
4a Sorites axioms 4b. Example $4 \times 2 = 2^{2 \times 4}$
5. CM & Sorites arithmetic (its unprovability)
6. Any → all
   plum pudding example
6a The Truth of CM
7. Peano's response – Gödel's theorem
7a Peano's Axioms.
8 The relevance of Peano's response – Russell paradox
9. Advantage of my argument over Lucas-Penrose.
10 Are minds machines?
11 Is Cantor's Paradise just La La Land?